

REC'D PCT/PTO 23 JUL 2003 #5



## SEQUENCE LISTING

<110> INCYTE CORPORATION  
 HILLMAN, Jennifer L.  
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 LAL, Preeti G.  
 LY, Dyung Aina M.

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<141> 2001-04-24

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Gln Val Thr Gly Lys Met Pro Ile Leu Ser Tyr Trp Pro Tyr Gly  
 35 40 45  
Cys His Cys Gly Leu Gly Gly Arg Gly Gln Pro Lys Asp Ala Thr  
 50 55 60  
Asp Trp Cys Cys Gln Thr His Asp Cys Cys Tyr Asp His Leu Lys  
 65 70 75

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|---|-----|---------------------|
| Thr Gln Gly Cys Gly Ile Tyr Lys Asp     | Tyr | Tyr Arg Tyr Asn Phe |
| 80                                      | 85  | 90                  |
| Ser Gln Gly Asn Ile His Cys Ser Asp     | Lys | Gly Ser Trp Cys Glu |
| 95                                      | 100 | 105                 |
| Gln Gln Leu Cys Ala Cys Asp Lys Glu     | Val | Ala Phe Cys Leu Lys |
| 110                                     | 115 | 120                 |
| Arg Asn Leu Asp Thr Tyr Gln Lys Arg     | Leu | Arg Phe Tyr Trp Arg |
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| Pro His Cys Arg Gly Gln Thr Pro Gly Cys |     |                     |
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| Arg Val Ala Ser His Leu Thr Asp Thr Gly Leu Leu Val Leu Phe |     |     |    |
| 20  | 25  | 30  |    |
| Cys Pro Ala Pro Cys Pro Phe Phe Phe Phe Glu Met Glu Ser     |     |     |    |
| 35  | 40  | 45  |    |
| Leu Ser Val Ala Gln Ala Gly Val Gln Trp Arg Asp Leu Gly Ser |     |     |    |
| 50  | 55  | 60  |    |
| Leu Gln Pro Pro Leu Gly Phe Lys Arg Phe Ser Cys Leu Ser     |     |     |    |
| 65  | 70  | 75  |    |
| Leu Pro Ser Ser Trp Asp Tyr Arg Leu Arg Glu Leu Ala Val Arg |     |     |    |
| 80  | 85  | 90  |    |
| Leu Gly Phe Gly Pro Cys Ala Glu Glu Gln Ala Phe Leu Ser Arg |     |     |    |
| 95  | 100 | 105 |    |
| Arg Lys Gln Val Val Ala Ala Ala Leu Arg Gln Ala Leu Gln Leu |     |     |    |
| 110   | 115 | 120 |    |
| Asp Gly Asp Leu Gln Glu Asp Glu Ile Pro Val Val Ala Ile Met |     |     |    |
| 125   | 130 | 135 |    |
| Ala Thr Gly Gly Ile Arg Ala Met Thr Ser Leu Tyr Gly Gln     |     |     |    |
| 140   | 145 | 150 |    |
| Leu Ala Gly Leu Lys Glu Leu Gly Leu Leu Asp Cys Val Ser Tyr |     |     |    |
| 155   | 160 | 165 |    |
| Ile Thr Gly Ala Ser Gly Ser Thr Trp Ala Leu Ala Asn Leu Tyr |     |     |    |
| 170   | 175 | 180 |    |
| Glu Asp Pro Glu Trp Ser Gln Lys Asp Leu Ala Gly Pro Thr Glu |     |     |    |
| 185   | 190 | 195 |    |
| Leu Leu Lys Thr Gln Val Thr Lys Asn Lys Leu Gly Val Leu Ala |     |     |    |
| 200   | 205 | 210 |    |
| Pro Ser Gln Leu Gln Arg Tyr Arg Gln Glu Leu Ala Glu Arg Ala |     |     |    |
| 215   | 220 | 225 |    |
| Arg Leu Gly Tyr Pro Ser Cys Phe Thr Asn Leu Trp Ala Leu Ile |     |     |    |
| 230   | 235 | 240 |    |
| Asn Glu Ala Leu Leu His Asp Glu Pro His Asp His Lys Leu Ser |     |     |    |

|   |     |     |
|---|-----|-----|
| 245   | 250 | 255 |
| Asp Gln Arg Glu Ala Leu Ser His Gly Gln Asn Pro Leu Pro Ile |     |     |
| 260   | 265 | 270 |
| Tyr Cys Ala Leu Asn Thr Lys Gly Gln Ser Leu Thr Thr Phe Glu |     |     |
| 275   | 280 | 285 |
| Phe Gly Glu Trp Cys Glu Phe Ser Pro Tyr Glu Val Gly Phe Pro |     |     |
| 290   | 295 | 300 |
| <br>  |     |     |
| Lys Tyr Gly Ala Phe Ile Pro Ser Glu Leu Phe Gly Ser Glu Phe |     |     |
| 305   | 310 | 315 |
| Phe Met Gly Gln Leu Met Lys Arg Leu Pro Glu Ser Arg Ile Cys |     |     |
| 320   | 325 | 330 |
| Phe Leu Glu Gly Ile Trp Ser Asn Leu Tyr Ala Ala Asn Leu Gln |     |     |
| 335   | 340 | 345 |
| Asp Ser Leu Tyr Trp Ala Ser Glu Pro Ser Gln Phe Trp Asp Arg |     |     |
| 350   | 355 | 360 |
| Trp Val Arg Asn Gln Ala Asn Leu Asp Lys Glu Gln Val Pro Leu |     |     |
| 365   | 370 | 375 |
| Leu Lys Ile Glu Glu Pro Pro Ser Thr Ala Gly Arg Ile Ala Glu |     |     |
| 380   | 385 | 390 |
| Phe Phe Thr Asp Leu Leu Thr Trp Arg Pro Leu Ala Gln Ala Thr |     |     |
| 395   | 400 | 405 |
| His Asn Phe Leu Arg Gly Leu His Phe His Lys Asp Tyr Phe Gln |     |     |
| 410   | 415 | 420 |
| His Pro His Phe Ser Thr Trp Lys Ala Thr Thr Leu Asp Gly Leu |     |     |
| 425   | 430 | 435 |
| Pro Asn Gln Leu Thr Pro Ser Glu Pro His Leu Cys Leu Leu Asp |     |     |
| 440   | 445 | 450 |
| Val Gly Tyr Leu Ile Asn Thr Ser Cys Leu Pro Leu Leu Gln Pro |     |     |
| 455   | 460 | 465 |
| Thr Arg Asp Val Asp Leu Ile Leu Ser Leu Asp Tyr Asn Leu His |     |     |
| 470   | 475 | 480 |
| Gly Ala Phe Gln Gln Leu Leu Leu Gly Arg Phe Cys Gln Glu     |     |     |
| 485   | 490 | 495 |
| Gln Gly Ile Pro Phe Pro Pro Ile Ser Pro Ser Pro Glu Glu Gln |     |     |
| 500   | 505 | 510 |
| Leu Gln Pro Arg Glu Cys His Thr Phe Ser Asp Pro Thr Cys Pro |     |     |
| 515   | 520 | 525 |
| Gly Ala Pro Ala Val Leu His Phe Ser Ser Gly Val Arg Arg Thr |     |     |
| 530   | 535 | 540 |
| Pro Glu Glu Ala Ala Gly Glu Val Asn Leu Ser Ser Ser Asp     |     |     |
| 545   | 550 | 555 |
| Ser Pro Tyr His Tyr Thr Lys Val Thr Tyr Ser Gln Glu Asp Val |     |     |
| 560   | 565 | 570 |
| Asp Lys Leu Leu His Leu Thr His Tyr Asn Val Cys Asn Asn Gln |     |     |
| 575   | 580 | 585 |
| Glu Gln Leu Leu Glu Ala Leu Arg Gln Ala Val Gln Arg Arg Arg |     |     |
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| Gln Arg Arg Pro His   |     |     |
| 605   |     |     |

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| Met | Pro | Pro | Gly | Pro | Trp | Glu | Ser | Cys | Phe | Trp | Val | Gly | Gly | Leu |
| 1   |     |     |     |     |     |     |     |     |     |     |     |     |     | 15  |
| Ile | Leu | Trp | Leu | Ser | Val | Gly | Ser | Ser | Gly | Asp | Ala | Pro | Pro | Thr |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     | 30  |
| 20  |     |     |     |     |     |     |     |     | 25  |     |     |     |     |     |
| Pro | Gln | Pro | Lys | Cys | Ala | Asp | Phe | Gln | Ser | Ala | Asn | Leu | Phe | Glu |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     | 45  |
| 35  |     |     |     |     |     |     |     |     | 40  |     |     |     |     |     |
| Gly | Thr | Asp | Leu | Lys | Val | Gln | Phe | Leu | Leu | Phe | Val | Pro | Ser | Asn |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     | 60  |
| 50  |     |     |     |     |     |     |     |     | 55  |     |     |     |     |     |
| Pro | Ser | Cys | Gly | Gln | Leu | Val | Glu | Gly | Ser | Ser | Asp | Leu | Gln | Asn |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     | 75  |
| 65  |     |     |     |     |     |     |     |     | 70  |     |     |     |     |     |
| Ser | Gly | Phe | Asn | Ala | Thr | Leu | Gly | Thr | Lys | Leu | Ile | Ile | His | Gly |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     | 90  |
| 80  |     |     |     |     |     |     |     |     | 85  |     |     |     |     |     |
| Phe | Arg | Val | Leu | Gly | Thr | Lys | Pro | Ser | Trp | Ile | Asp | Thr | Phe | Ile |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     | 105 |
| 95  |     |     |     |     |     |     |     |     | 100 |     |     |     |     |     |
| Arg | Thr | Leu | Leu | Arg | Ala | Thr | Asn | Ala | Asn | Val | Ile | Ala | Val | Asp |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     | 120 |
| 110 |     |     |     |     |     |     |     |     | 115 |     |     |     |     |     |
| Trp | Ile | Tyr | Gly | Ser | Thr | Gly | Val | Tyr | Phe | Ser | Ala | Val | Lys | Asn |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     | 135 |
| 125 |     |     |     |     |     |     |     |     | 130 |     |     |     |     |     |
| Val | Ile | Lys | Leu | Ser | Leu | Glu | Ile | Ser | Leu | Phe | Leu | Asn | Lys | Leu |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     | 150 |
| 140 |     |     |     |     |     |     |     |     | 145 |     |     |     |     |     |
| Leu | Val | Leu | Gly | Val | Ser | Glu | Ser | Ser | Ile | His | Ile | Ile | Gly | Val |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     | 165 |
| 155 |     |     |     |     |     |     |     |     | 160 |     |     |     |     |     |
| Ser | Leu | Gly | Ala | His | Val | Gly | Gly | Met | Val | Gly | Gln | Leu | Phe | Gly |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     | 180 |
| 170 |     |     |     |     |     |     |     |     | 175 |     |     |     |     |     |
| Gly | Gln | Leu | Gly | Gln | Ile | Thr | Gly | Leu | Asp | Pro | Ala | Gly | Pro | Glu |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     | 195 |
| 185 |     |     |     |     |     |     |     |     | 190 |     |     |     |     |     |
| Tyr | Thr | Arg | Ala | Ser | Val | Glu | Glu | Arg | Leu | Asp | Ala | Gly | Asp | Ala |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     | 210 |
| 200 |     |     |     |     |     |     |     |     | 205 |     |     |     |     |     |
| Leu | Phe | Val | Glu | Ala | Ile | His | Thr | Asp | Thr | Asp | Asn | Leu | Gly | Ile |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     | 225 |
| 215 |     |     |     |     |     |     |     |     | 220 |     |     |     |     |     |
| Arg | Ile | Pro | Val | Gly | His | Val | Asp | Tyr | Phe | Val | Asn | Gly | Gly | Gln |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     | 240 |
| 230 |     |     |     |     |     |     |     |     | 235 |     |     |     |     |     |
| Asp | Gln | Pro | Gly | Cys | Pro | Thr | Phe | Phe | Tyr | Ala | Gly | Tyr | Ser | Tyr |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     | 255 |
| 245 |     |     |     |     |     |     |     |     | 250 |     |     |     |     |     |
| Leu | Ile | Cys | Asp | His | Met | Arg | Ala | Val | His | Leu | Tyr | Ile | Ser | Ala |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     | 270 |
| 260 |     |     |     |     |     |     |     |     | 265 |     |     |     |     |     |
| Leu | Glu | Asn | Ser | Cys | Pro | Leu | Met | Ala | Phe | Pro | Cys | Ala | Ser | Tyr |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     | 285 |
| 275 |     |     |     |     |     |     |     |     | 280 |     |     |     |     |     |
| Lys | Ala | Phe | Leu | Ala | Gly | Arg | Cys | Leu | Asp | Cys | Phe | Asn | Pro | Phe |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     | 300 |
| 290 |     |     |     |     |     |     |     |     | 295 |     |     |     |     |     |
| Leu | Leu | Ser | Cys | Pro | Arg | Ile | Gly | Leu | Val | Glu | Gln | Gly | Gly | Val |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     | 315 |
| 305 |     |     |     |     |     |     |     |     | 310 |     |     |     |     |     |
| Lys | Ile | Glu | Pro | Leu | Pro | Lys | Glu | Val | Lys | Val | Tyr | Leu | Leu | Thr |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     | 330 |
| 320 |     |     |     |     |     |     |     |     | 325 |     |     |     |     |     |
| Thr | Ser | Ser | Ala | Pro | Tyr | Cys | Met | His | His | Ser | Leu | Val | Glu | Phe |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     | 345 |
| 335 |     |     |     |     |     |     |     |     | 340 |     |     |     |     |     |
| His | Leu | Lys | Glu | Leu | Arg | Asn | Lys | Asp | Thr | Asn | Ile | Glu | Val | Thr |
|     |     |     |     |     |     |     |     |     |     |     |     |     |     | 360 |
| 350 |     |     |     |     |     |     |     |     | 355 |     |     |     |     |     |
| Phe | Leu | Ser | Ser | Asn | Ile | Thr | Ser | Ser | Ser | Lys | Ile | Thr | Ile | Pro |

|   |     |     |
|---|-----|-----|
| 365   | 370 | 375 |
| Lys Gln Gln Arg Tyr Gly Lys Gly Ile Ile Ala His Ala Thr Pro |     |     |
| 380   | 385 | 390 |
| Gln Cys Gln Ile Asn Gln Val Lys Phe Lys Phe Gln Ser Ser Asn |     |     |
| 395   | 400 | 405 |
| Arg Val Trp Lys Asp Arg Thr Thr Ile Ile Gly Lys Phe Cys     |     |     |
| 410   | 415 | 420 |
| Thr Ala Leu Leu Pro Val Asn Asp Arg Glu Lys Met Val Cys Leu |     |     |
| 425   | 430 | 435 |
| Pro Glu Pro Val Asn Leu Gln Ala Ser Val Thr Val Ser Cys Asp |     |     |
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| Leu Lys Ile Ala Cys Val                                     |     |     |
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cgtggaaagcc atccacacag acaccgacaa tttgggtatt cggattcccg ttggacatgt 720  
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 gatagcctgt gtgttagttt acctggcag gacacatctc cctgcatttt ttttttttt 1440  
 tgagagagag gtgtgatgag gatgtgtgt gtgcagctt tttagacca ttactactaa 1500  
 ggagaaaagg aaagctttt cttatccc tcataatcag ctaccctggaa ggggagggag 1560  
 aactcatttt acagaacttg gtttccttg ccgatcttat gtacatacc accatgtttt 1620  
 tcccatgcat acttaactgc acttgcttta tctccttggg cattcgtaact taggattcaa 1680  
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 aaaaaaa 1746

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 <213> Rattus norvegicus

<220>  
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<400> 7

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|-----|-----|-----|-----|-----|
| Met | Lys | Val | Leu | Leu | Leu | Leu | Ala | Val | Val           | Ile | Met | Ala | Phe | Gly |
| 1   |     |     |     |     |     |     |     |     |               |     |     |     |     |     |
| Ser | Ile | Gln | Val | Gln | Gly | Ser | Leu | Leu | Glutamic acid | Phe | Gly | Gln | Met | Ile |
|     |     |     |     |     |     |     |     |     |               |     |     |     |     |     |
| Leu | Phe | Lys | Thr | Gly | Lys | Arg | Ala | Asp | Val           | Ser | Tyr | Gly | Phe | Tyr |
|     |     |     |     |     |     |     |     |     |               |     |     |     |     |     |
| Gly | Cys | His | Cys | Gly | Val | Gly | Gly | Arg | Gly           | Ser | Pro | Lys | Asp | Ala |
|     |     |     |     |     |     |     |     |     |               |     |     |     |     |     |
| Thr | Asp | Trp | Cys | Cys | Val | Thr | His | Asp | Cys           | Cys | Tyr | Asn | Arg | Leu |
|     |     |     |     |     |     |     |     |     |               |     |     |     |     |     |
| Glu | Lys | Arg | Gly | Cys | Gly | Thr | Lys | Phe | Leu           | Thr | Tyr | Lys | Phe | Ser |
|     |     |     |     |     |     |     |     |     |               |     |     |     |     |     |
| Tyr | Arg | Gly | Gly | Gln | Ile | Ser | Cys | Ser | Thr           | Asn | Gln | Asp | Ser | Cys |
|     |     |     |     |     |     |     |     |     |               |     |     |     |     |     |
| Arg | Lys | Gln | Leu | Cys | Gln | Cys | Asp | Lys | Ala           | Ala | Ala | Glu | Cys | Phe |
|     |     |     |     |     |     |     |     |     |               |     |     |     |     |     |
| Ala | Arg | Asn | Lys | Lys | Ser | Tyr | Ser | Leu | Lys           | Tyr | Gln | Phe | Tyr | Leu |
|     |     |     |     |     |     |     |     |     |               |     |     |     |     |     |
| Asn | Lys | Phe | Cys | Lys | Gly | Lys | Thr | Pro | Ser           | Cys |     |     |     |     |
|     |     |     |     |     |     |     |     |     |               |     |     |     |     |     |

<210> 8  
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 <212> PRT

&lt;213&gt; Gallus gallus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;223&gt; GenBank ID No: g508625

&lt;400&gt; 8

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ser | Phe | Ile | Asp | Pro | Tyr | Gln | His | Ile | Val | Val | Glu | His | Gln |
| 1   |     |     |     |     |     |     |     |     | 10  |     |     |     |     | 15  |
| Tyr | Ser | His | Val | Phe | Thr | Val | Thr | Val | Arg | Lys | Ala | Thr | Asn | Val |
|     |     |     |     |     |     |     |     |     | 25  |     |     |     |     | 30  |
| Thr | Lys | Gly | Ala | Ile | Gly | Asp | Met | Leu | Asp | Thr | Pro | Asp | Pro | Tyr |
|     |     |     |     |     |     |     |     |     | 40  |     |     |     |     | 45  |
| Val | Glu | Leu | Phe | Ile | Pro | Ser | Ala | Pro | Asp | Cys | Arg | Lys | Arg | Thr |
|     |     |     |     |     |     |     |     |     | 55  |     |     |     |     | 60  |
| Lys | His | Phe | Asn | Asn | Asp | Val | Asn | Pro | Val | Trp | Asn | Glu | Thr | Phe |
|     |     |     |     |     |     |     |     |     | 70  |     |     |     |     | 75  |
| Glu | Phe | Ile | Leu | Asp | Pro | Asn | Gln | Asp | Asn | Val | Leu | Glu | Val | Thr |
|     |     |     |     |     |     |     |     |     | 85  |     |     |     |     | 90  |
| Leu | Met | Asp | Ala | Asn | Tyr | Val | Met | Asp | Glu | Thr | Leu | Gly | Met | Ala |
|     |     |     |     |     |     |     |     |     | 100 |     |     |     |     | 105 |
| Thr | Phe | Pro | Ile | Ser | Ser | Leu | Lys | Leu | Gly | Glu | Lys | Lys | Glu | Val |
|     |     |     |     |     |     |     |     |     | 115 |     |     |     |     | 120 |
| Gln | Leu | Thr | Phe | Asn | Asn | Val | Thr | Glu | Met | Thr | Leu | Glu | Leu | Ser |
|     |     |     |     |     |     |     |     |     | 125 |     |     |     |     | 135 |
| Leu | Glu | Val | Cys | Ser | Ser | Thr | Asp | Leu | Arg | Phe | Ser | Met | Ala | Leu |
|     |     |     |     |     |     |     |     |     | 140 |     |     |     |     | 150 |
| Cys | Asp | Glu | Glu | Lys | Lys | Phe | Arg | Gln | Gln | Arg | Lys | Asp | Asn | Ile |
|     |     |     |     |     |     |     |     |     | 155 |     |     |     |     | 165 |
| Met | Gln | Ser | Met | Lys | Ser | Phe | Leu | Gly | Glu | Glu | Asn | Ser | Lys | Asn |
|     |     |     |     |     |     |     |     |     | 170 |     |     |     |     | 180 |
| Leu | Thr | Thr | Ser | Arg | Asp | Val | Pro | Val | Ile | Ala | Val | Leu | Gly | Ser |
|     |     |     |     |     |     |     |     |     | 185 |     |     |     |     | 195 |
| Gly | Gly | Gly | Phe | Arg | Ala | Met | Val | Gly | Phe | Ala | Gly | Val | Met | Lys |
|     |     |     |     |     |     |     |     |     | 200 |     |     |     |     | 210 |
| Ala | Leu | Tyr | Glu | Ser | Gly | Val | Leu | Asp | Cys | Ala | Thr | Tyr | Ile | Ala |
|     |     |     |     |     |     |     |     |     | 215 |     |     |     |     | 225 |
| Gly | Leu | Ser | Gly | Ser | Thr | Trp | Tyr | Met | Ser | Thr | Leu | Tyr | Ser | His |
|     |     |     |     |     |     |     |     |     | 230 |     |     |     |     | 240 |
| Pro | Asp | Phe | Pro | Glu | Lys | Gly | Pro | Lys | Glu | Ile | Asn | Gln | Glu | Leu |
|     |     |     |     |     |     |     |     |     | 245 |     |     |     |     | 255 |
| Met | Asn | Ser | Val | Ser | His | Asn | Pro | Leu | Leu | Leu | Leu | Thr | Pro | Gln |
|     |     |     |     |     |     |     |     |     | 260 |     |     |     |     | 270 |
| Lys | Val | Lys | Arg | Tyr | Ile | Glu | Ala | Leu | Trp | Asn | Lys | Lys | Ser | Ser |
|     |     |     |     |     |     |     |     |     | 275 |     |     |     |     | 285 |
| Gly | Gln | Pro | Val | Thr | Phe | Thr | Asp | Ile | Phe | Gly | Met | Leu | Ile | Gly |
|     |     |     |     |     |     |     |     |     | 290 |     |     |     |     | 300 |
| Glu | Thr | Leu | Ile | His | Asn | Arg | Met | Asp | Thr | Thr | Leu | Ser | Asp | Met |
|     |     |     |     |     |     |     |     |     | 305 |     |     |     |     | 315 |
| Lys | Glu | Lys | Val | Ser | Glu | Ala | Gln | Cys | Ala | Leu | Pro | Leu | Phe | Thr |
|     |     |     |     |     |     |     |     |     | 320 |     |     |     |     | 330 |
| Cys | Leu | His | Val | Lys | Pro | Asp | Val | Ser | Glu | Leu | Met | Phe | Ala | Asp |
|     |     |     |     |     |     |     |     |     | 335 |     |     |     |     | 345 |
| Trp | Val | Glu | Phe | Ser | Pro | Tyr | Glu | Ile | Gly | Met | Ala | Lys | Tyr | Gly |
|     |     |     |     |     |     |     |     |     | 350 |     |     |     |     | 360 |
| Thr | Phe | Met | Ser | Pro | Asp | Leu | Phe | Gly | Ser | Lys | Phe | Phe | Met | Gly |

|   |     |     |
|---|-----|-----|
| 365   | 370 | 375 |
| Thr Val Val Lys Lys Tyr Ser Glu Asn Pro Leu His Phe Leu Met |     |     |
| 380   | 385 | 390 |
| Gly Val Trp Gly Ser Ala Phe Ser Ile Leu Phe Asn Arg Val Leu |     |     |
| 395   | 400 | 405 |
| Gly Val Ser Asn Ser Gln Asn Lys Gly Pro Thr Met Glu Glu Glu |     |     |
| 410   | 415 | 420 |
| Leu Glu Asn Ile Arg Leu Lys His Leu Val Ser Asn Asp Ser Ser |     |     |
| 425   | 430 | 435 |
| Asp Ser Glu Asp Glu Ser Gln His Pro Lys Gly Thr Glu Asn Ser |     |     |
| 440   | 445 | 450 |
| Glu Ala Asn Glu Glu Tyr Gln Asn Ser Ser Gln Glu Ser Trp Val |     |     |
| 455   | 460 | 465 |
| Gln Arg Met Leu Met Ala Leu Val Gly Asp Ser Ala Leu Phe Asn |     |     |
| 470   | 475 | 480 |
| Thr Arg Glu Gly Arg Ala Gly Lys Val His Asn Phe Met Leu Gly |     |     |
| 485   | 490 | 495 |
| Leu Asn Leu Asn Ser Cys Tyr Pro Leu Ser Pro Leu Ala Asp Leu |     |     |
| 500   | 505 | 510 |
| Leu Thr Gln Glu Ser Val Glu Glu Asp Glu Leu Asp Ala Ala Val |     |     |
| 515   | 520 | 525 |
| Ala Asp Pro Asp Glu Phe Glu Arg Ile Tyr Glu Pro Leu Asp Val |     |     |
| 530   | 535 | 540 |
| Lys Ser Lys Lys Ile His Ile Val Asp Ser Gly Leu Thr Phe Asn |     |     |
| 545   | 550 | 555 |
| Leu Pro Tyr Pro Leu Ile Leu Arg Pro Gln Arg Gly Val Asp Leu |     |     |
| 560   | 565 | 570 |
| Ile Ile Ser Phe Asp Phe Ser Ala Arg Pro Ser Asp Ser Ser Pro |     |     |
| 575   | 580 | 585 |
| Pro Phe Lys Glu Ile Leu Leu Ala Glu Lys Trp Ala Lys Met Asn |     |     |
| 590   | 595 | 600 |
| Lys Leu Pro Phe Pro Lys Ile Asp Pro Asn Val Phe Asp Arg Glu |     |     |
| 605   | 610 | 615 |
| Gly Leu Lys Glu Cys Tyr Val Phe Lys Pro Lys Asp Thr Ser Ser |     |     |
| 620   | 625 | 630 |
| Glu Lys Asp Cys Pro Thr Ile Ile His Phe Val Leu Ala Asn Ile |     |     |
| 635   | 640 | 645 |
| Asn Phe Arg Lys Tyr Lys Ala Pro Gly Leu Pro Arg Glu Ser Lys |     |     |
| 650   | 655 | 660 |
| Glu Glu Lys Asp Phe Ala Asp Phe Asp Ile Phe Asp Asp Pro Asn |     |     |
| 665   | 670 | 675 |
| Thr Pro Phe Ser Thr Phe Asn Phe Gln Tyr Pro Asn Glu Ala Phe |     |     |
| 680   | 685 | 690 |
| Lys Arg Leu His Asp Leu Met Glu Phe Asn Thr Leu Asn Asn Leu |     |     |
| 695   | 700 | 705 |
| Asp Val Ile Lys Gln Ala Met Met Glu Ser Ile Glu Tyr Arg Lys |     |     |
| 710   | 715 | 720 |
| Glu Asn Pro Ser Arg Cys Ser Val Ser Leu Ser Ser Val Glu Ala |     |     |
| 725   | 730 | 735 |
| Arg Arg Phe Phe Asn Lys Asn Asn Leu Asn Asn His Thr         |     |     |
| 740   | 745 |     |

&lt;210&gt; 9

&lt;211&gt; 456

&lt;212&gt; PRT

&lt;213&gt; Rattus norvegicus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;223&gt; GenBank ID No: g1817556

&lt;400&gt; 9

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Cys | Pro | Gly | Leu | Trp | Gly | Thr | Cys | Phe | Trp | Leu | Trp | Gly | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |
| Leu | Leu | Trp | Leu | Ser | Ile | Gly | Arg | Ser | Gly | Asn | Val | Pro | Pro | Thr |
|     |     |     |     |     | 20  |     |     |     | 25  |     |     |     |     | 30  |
| Thr | Gln | Pro | Lys | Cys | Thr | Asp | Phe | Gln | Ser | Ala | Asn | Leu | Leu | Arg |
|     |     |     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |
| Gly | Thr | Asn | Leu | Lys | Val | Gln | Phe | Leu | Leu | Phe | Thr | Pro | Ser | Asp |
|     |     |     |     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |
| Pro | Gly | Cys | Gly | Gln | Leu | Val | Glu | Glu | Asp | Ser | Asp | Ile | Arg | Asn |
|     |     |     |     |     | 65  |     |     |     | 70  |     |     |     |     | 75  |
| Ser | Glu | Phe | Asn | Ala | Ser | Leu | Gly | Thr | Lys | Leu | Ile | Ile | His | Gly |
|     |     |     |     |     | 80  |     |     |     | 85  |     |     |     |     | 90  |
| Phe | Arg | Ala | Leu | Gly | Thr | Lys | Pro | Ser | Trp | Ile | Asn | Lys | Phe | Ile |
|     |     |     |     |     | 95  |     |     |     | 100 |     |     |     |     | 105 |
| Arg | Ala | Leu | Leu | Arg | Ala | Ala | Asp | Ala | Asn | Val | Ile | Ala | Val | Asp |
|     |     |     |     |     | 110 |     |     |     | 115 |     |     |     |     | 120 |
| Trp | Val | Tyr | Gly | Ser | Thr | Gly | Met | Tyr | Phe | Ser | Ala | Val | Glu | Asn |
|     |     |     |     |     | 125 |     |     |     | 130 |     |     |     |     | 135 |
| Val | Val | Lys | Leu | Ser | Leu | Glu | Ile | Ser | Arg | Phe | Leu | Ser | Lys | Leu |
|     |     |     |     |     | 140 |     |     |     | 145 |     |     |     |     | 150 |
| Leu | Glu | Leu | Gly | Val | Ser | Glu | Ser | Ser | Ile | His | Ile | Ile | Gly | Val |
|     |     |     |     |     | 155 |     |     |     | 160 |     |     |     |     | 165 |
| Ser | Leu | Gly | Ala | His | Val | Gly | Gly | Met | Val | Gly | His | Phe | Tyr | Lys |
|     |     |     |     |     | 170 |     |     |     | 175 |     |     |     |     | 180 |
| Gly | Gln | Leu | Gly | Arg | Ile | Thr | Gly | Leu | Asp | Pro | Ala | Gly | Pro | Glu |
|     |     |     |     |     | 185 |     |     |     | 190 |     |     |     |     | 195 |
| Tyr | Thr | Arg | Ala | Ser | Leu | Glu | Glu | Arg | Leu | Asp | Ser | Gly | Asp | Ala |
|     |     |     |     |     | 200 |     |     |     | 205 |     |     |     |     | 210 |
| Leu | Phe | Val | Glu | Ala | Ile | His | Thr | Asp | Thr | Asp | Asn | Leu | Gly | Ile |
|     |     |     |     |     | 215 |     |     |     | 220 |     |     |     |     | 225 |
| Arg | Ile | Pro | Val | Gly | His | Val | Asp | Tyr | Phe | Val | Asn | Gly | Gly | Gln |
|     |     |     |     |     | 230 |     |     |     | 235 |     |     |     |     | 240 |
| Asp | Gln | Pro | Gly | Cys | Pro | Ala | Phe | Ile | His | Ala | Gly | Tyr | Ser | Tyr |
|     |     |     |     |     | 245 |     |     |     | 250 |     |     |     |     | 255 |
| Leu | Ile | Cys | Asp | His | Met | Arg | Ala | Val | His | Leu | Tyr | Ile | Ser | Ala |
|     |     |     |     |     | 260 |     |     |     | 265 |     |     |     |     | 270 |
| Leu | Glu | Asn | Thr | Cys | Pro | Leu | Met | Ala | Phe | Pro | Cys | Ala | Ser | Tyr |
|     |     |     |     |     | 275 |     |     |     | 280 |     |     |     |     | 285 |
| Lys | Ala | Phe | Leu | Ala | Gly | Asp | Cys | Leu | Asp | Cys | Phe | Asn | Pro | Phe |
|     |     |     |     |     | 290 |     |     |     | 295 |     |     |     |     | 300 |
| Leu | Leu | Ser | Cys | Pro | Arg | Ile | Gly | Leu | Val | Glu | Arg | Gly | Gly | Val |
|     |     |     |     |     | 305 |     |     |     | 310 |     |     |     |     | 315 |
| Lys | Ile | Glu | Pro | Leu | Pro | Lys | Glu | Val | Arg | Val | Tyr | Leu | Gln | Thr |
|     |     |     |     |     | 320 |     |     |     | 325 |     |     |     |     | 330 |
| Thr | Ser | Ser | Ala | Pro | Tyr | Cys | Val | His | His | Ser | Leu | Val | Glu | Phe |
|     |     |     |     |     | 335 |     |     |     | 340 |     |     |     |     | 345 |
| Asn | Leu | Lys | Glu | Lys | Arg | Lys | Lys | Asp | Thr | Ser | Ile | Glu | Val | Thr |
|     |     |     |     |     | 350 |     |     |     | 355 |     |     |     |     | 360 |
| Phe | Leu | Gly | Asn | Asn | Val | Thr | Ser | Ser | Val | Lys | Ile | Thr | Ile | Pro |

|                                     |                         |     |
|-------------------------------------|-------------------------|-----|
| 365                                 | 370                     | 375 |
| Lys Asp His Leu Glu Gly Arg Gly Ile | Ile Ala His Gln Asn Pro |     |
| 380                                 | 385                     | 390 |
| His Cys Gln Ile Asn Gln Val Lys Leu | Lys Phe His Ile Ser Ser |     |
| 395                                 | 400                     | 405 |
| Arg Val Trp Arg Lys Asp Arg Thr Pro | Ile Val Gly Thr Phe Cys |     |
| 410                                 | 415                     | 420 |
| Thr Ala Pro Leu Pro Val Asn Asp Ser | Lys Lys Thr Val Cys Ile |     |
| 425                                 | 430                     | 435 |
| Pro Glu Pro Val Arg Leu Gln Val Ser | Met Ala Val Leu Arg Asp |     |
| 440                                 | 445                     | 450 |
| Leu Lys Met Ala Cys Val             |                         |     |
| 455                                 |                         |     |

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<211> 5  
<212> PRT  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 2, 4  
<223> unknown, or other

<220>  
<221> misc\_feature  
<223> motif

<400> 10  
Gly Xaa Ser Xaa Gly  
1 5